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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/446,523	12/28/1999	Gerd Altmeyer	39252	2447

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EXAMINER

DRODGE, JOSEPH W

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/446,523

Applicant(s)  
ALTMAYER ET AL

Examiner  
JOSEPH DRODGE

Art Unit  
1723



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Apr 11, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 10-25 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10-12, 17-22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller patent 4,609,465 in view of Pall patent 3,457,339.

Miller discloses a filter cartridge element comprising a permeable inner support pipe 16, a mat (plastic, cylindrical, pleated) filter element 14 therearound and a plastic filter casing having openings 15 (column 2, lines 47-58, etc.); also disclosed are end caps 12 and 13, upon installation the axial end portions of the mat filter being heat treated and compressed (hence, inherently forming a conical shape with respect to remainder of mat filter) and then being inserted into the casing such that the filter element is supported on and between the casing and pipe (column 3, lines 47-53). As also supported by figure 2 and column 2, lines 50-56, such insertion creates a fit between mat filter and casing which is tight enough to enable the disclosed function of the casing and inner support pipe to repel radially inward and outward forces on the filter mat and restrain it from swelling.

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The claims at least differ in requiring that the plastic casing be formed as a blank sheet that has opposite ends which are bent towards each other to form a cylinder and then joined by a seam. Pall et al teach such manufacturing method in column 1, lines 42-47. Also, Miller disclose that the manufacturing methods of the Pall patent are utilized in column 3, lines 57-59. Hence, At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have constructed the plastic casing of the Miller filter to be formed of a blank sheet with ends joined by a seam, as taught by Pall, so as to provide a stable, cylindrical shape of the casing in order to maintain the integrity of the filter during filtration processes wherein inward or outward radial stresses are exhibited in the filter.

Miller and Pall are silent as to whether the mat filter initially has a larger exterior diameter than the interior diameter of the filter casing. However, At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have considered the mat filter element 14 to inherently be of such relatively larger diameter prior to its insertion into the cage 15, since preliminary manufacturing steps of heating and compressing the end pleats (resulting in decreased diameter of the ends of the mat filter element) are necessary before the mat filter may be inserted into the cage. Hence, resulting in an "interference fit" of filter mat and casing when other text portions and figures of Miller are also considered.

Regarding claims 11, 12 and 16, see Miller column 3, lines 55-59 and Pall et al column 2, lines 38-45, etc. concerning heat sealing of the seam and other components.

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Regarding claims 17-20, see disclosure in Miller of all filter elements being comprised of PVDF, PTFE or other fluoropolymers, all well known recyclable plastics.

Regarding claim 21, claimed punching out method is deemed a product-by-process manufacturing step and hence of little patentable weight in such apparatus claim.

Regarding claim 22, see figure 3 of Miller.

Regarding claim 25, figure 2 and column 3, lines 52-53 of Miller suggest interference fit also of mat filter to supporting pipe.

3. Claims 13, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Pall et al as applied to claim 10 above, and further in view of Domnick patent 3,460,680 of record.

Claim 13 further differs in requiring that the filter casing has an ultrasonic weld. Domnick teaches such weld in column 3, lines 1-3. At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have utilized such weld in the Miller apparatus to permanently maintain the shape of the casing.

Claim 23 further differs by requiring the sealing seam to comprise intermittent contact points. Domnick teaches such feature in the teaching of spot welding (column 3, lines 1-2 and column 2, lines 60-61. At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have utilized such spot welding (contact points) in the filter of Miller, as taught by Domnick, to prevent tearing of the filter medium.

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Claim 24 also differs in requiring that the filter casing be designed to have an overlapping area of filter casing ends. Domnick teaches such construction in column 2, lines 66-71. At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have also utilized such construction of the casing in the Miller apparatus, as taught by Domnick, to provide a more secure shape of the filter casing.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Pall et al as applied to claim 10 above, and further in view of Komarmy of record. Claim 14 further differs in the requirement for the extra fold of the mat filter element. However, Komarmy teaches such extra fold in column 2, lines 10-13 and figure 2. At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have modified the Miller apparatus mat filter, to more securely maintain the shape of the mat filter.

5. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Pall et al as applied to claim 14 above, and further in view of Domnick.

Claims 15 and 16 also differ in requiring the ultrasonic weld. At the time the present invention was made, it would have been obvious to one of ordinary skill in this art to have also utilized the ultrasonic weld taught by Domnick in the filter of Miller to permanently maintain the shape of the casing.

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*Response to Arguments*

6. Applicant's arguments with respect to claims 10-25 have been considered but are moot in view of the new ground(s) of rejection (i.e. interference fit along entire mat filter length).

*Conclusion*

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph W. Drodge whose telephone number is (703) 308-0403. The examiner can normally be reached on Monday-Friday from approximately 8:30 AM - 4:45 PM.

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The fax phone number for this Group is (703) 872-9310 or (703) 872-9311 for after final submissions. When filing a FAX in Tech Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

  
Joseph W. Drodge  
Primary Examiner  
Art Unit 1723

JWD  
June 19, 2003